

The Goodman Cancer Research Centre Seminar Series 2016-17

Invited Seminar Speaker

Wednesday, May 10, 2017
4:00 PM – 5:00 PM
McIntyre Medical Building
Martin Amphitheatre, Room 504



Andrew Ewald, Ph.D.

Associate Professor

Principal Investigator

The Johns Hopkins University School of Medicine

Cellular and molecular mechanisms of breast cancer metastasis

The overwhelming majority of cancer mortality is attributable to metastasis, the process by which cells escape from the primary tumor, access the systemic circulation, and colonize distant organs. Work from our lab and others has revealed that these steps can be accomplished by cancer cells that retain an epithelial phenotype while transitioning between distinct phenotypic states specialized for either proliferation or migration. Our recent publications demonstrated that proliferative breast cancer cells acquire migratory and invasive potential through the expression of basal genes, such as keratin 14 (K14) and p63. This transition occurs specifically at the tumor stroma border. These K14+ cancer cells collectively invade and intravasate as adherent groups of cells, through microenvironments defined by aligned, fibrillar collagen I. Upon arrival at the distant site, these predominantly K14+ clusters transition to predominantly K14- growing metastases. We have developed 3D culture models of invasion past the myoepithelium, intravasation, and metastatic colony formation. We are currently exploiting these models to define the molecular drivers of transitions between proliferative and migratory epithelial states. We are also working on defining the role of epithelial cell adhesion programs in collective strategies for metastasis. Our ultimate goal is to develop novel concepts for anti-metastatic therapies.

STUDENTS: If you would like to attend a lunch with Dr. Ewald, please send an email to: leah.donnelly@mcgill.ca

EVERYONE IS WELCOME

BIENVENUE A TOUS

**MANDATORY FOR GRADUATE
STUDENTS / OBLIGATOIRE
POUR ÉTUDIANTS DIPLÔMÉS**

